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TC 1700

REMARKS

Claims 1-7, 10, 13, 17, 19, 21-24, and 26-29 are pending in the present application.

Claims 1, 10, 13 and 26-29 have been amended. Claims 8, 9, 11, 12, 14-16, 18, 20 and 25 have been canceled without prejudice.

Amendment or cancellation of the originally filed claims should in no way be construed as an acquiescence, narrowing, or surrender of any subject matter. The amendments are being made not only to point out with particularity and to claim the present invention, but also to expedite prosecution of the present application. Applicants reserve the option to prosecute the originally filed claims further, or similar ones, in the instant or a subsequent patent application.

Claim Rejections Based on 35 USC 102

Claims 1-3, 6-9, 11, 14-16, 18-19 and 21 stand rejected under 35 U.S.C § 102 (e) as being anticipated by Dai et al (U.S. Patent No. 6.401,526). Claim 1 has been amended to recite a metallic catalytic colloidal material, and wherein the carbon nanotube tip comprises a SWNT. Dai et al does not teach or suggest using a metallic catalytic colloidal material. Claims 2-3, 6, 7, 19 and 21 are dependent on amended claim 1 or dependent claims thereon. Claims 8, 9, 11, 14-16, 18 and 20 have been canceled. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Claims 1, 17, and 20 stand rejected under 35 U.S.C § 102 (b) as being anticipated by Hafner et al., "Growth of nanotubes for probe microscopy tips." (Nature v. 398 p. 761 1999). Claim 1 has been amended to recite a metallic catalytic colloidal material. Hafner et al does not teach or suggest using a metallic catalytic colloidal material. Claim 17 is dependent on claim 1. Claim 20 has been canceled. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Claim Rejections Based on 35 USC 103

Claims 12 and 22-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Dai et al. Claim 12 has been canceled, rendering the rejection of claim 12 moot. Claim 22 is dependent on amended claim 1. The Examiner asserts that Dai et al "teach an electric etching nanotube shortening process. The SWNT is brought into contact with a heavily doped silicon

substrate. A voltage is applied between the tube and substrate and *gradually increased* until the loss of tube-substrate contact occurs as a result of *nanotube shortening.*" (Emphasis Applicants). Dai teaches only nanotube shortening using gradually increased voltage. Dai does not teach or suggest applying a voltage pulse at a higher voltage thereby *disconnecting the nanotube tip* to deposit a nanotube segment on a substrate. Further, there is no reasonable expectation of success based on any teaching to arrive at the instant claimed invention. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Claims 4 and 5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Dai et al. in view of Kong et al. However, because Dai does not teach all of the limitations of claim 1 or 3, the Applicants assert that the combination of Dai with Kong cannot form the basis of a valid rejection under 35 USC 103(a) of claim 4 or 5. In other words, the deficiencies vis-à-vis claims 4 and 5 of Dai are not cured by combining it with Kong. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Claims 10 and 13 stand rejected as being unpatentable over Dai et al as applied to claim 1 and 8, and further in view of Ago et al. ("Dispersion of metal nanoparticles for aligned carbon nanotube arrays.") Claim 1 has been amended to recite a metallic catalytic colloidal material, and wherein the carbon nanotube tip comprises a SWNT. The Examiner notes that Dai et al "does not specifically teach the use of metal colloid suspensions." Further, contrary to the Examiner's assertion, Ago et al does *not* disclose "the use of metal colloid suspensions for the dispersion of catalytic nanoparticles which serve as active sites for SWNT synthesis." Ago et al suggests only colloidal dispersion of cobalt nanoparticles for MWNT formation only. There is no teaching or suggestion in Ago et al or Dai et al that a colloidal dispersion of metal nanoparticles could be used for making SWNTs, nor is there any expectation of success on a program based the combination of Dai et al and Ago et al together or alone. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Claims 25 and 27-29 stand rejected under 35 USC 103(a) as being unpatentable over Boggild (USPGPub 2002/0061662 A2). Claim 25 has been canceled. Claim 26 has been rewritten in independent form and claims 27-29 now depend on claim 26. Therefore, this rejection is moot.

Allowable Subject Matter

The Examiner objected to claim 26 as being dependent upon a rejected base claim, but indicated that it would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Applicants respectfully contend that the arguments, claim cancellations, and claim amendments made herein overcome the Examiner's rejections of the relevant base and intervening claims, thereby overcoming the Examiner's objection to pending claim 26. Consequently, the Applicants respectfully maintain that the pending claims are in condition for allowance.

Fees

The Applicants believe no fee is due in connection with the filing of this paper. Nevertheless, the Director is hereby authorized to charge any required fee to our Deposit Account, **06-1448**.

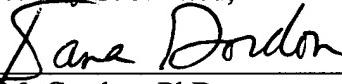
CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that the pending claims are in condition for allowance. Early and favorable reconsideration is respectfully solicited. The Examiner may address any questions raised by this submission to the undersigned at 617-832-1000.

Respectfully Submitted,

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